1636

BAKER BOTTS L.L.P.

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/002,631
Filing Date	October 31, 2001
First Named Inventor	Graff
Group Art Unit	1636
Examiner Name	Lambertson, M
Total Number of Pages in This Submission	
Attorney Docket Number	A34943 090495.0243

ENCLOSURES *(check all that apply)*

- [x] Fee Transmittal Form
- [ ] Fee Attached
- [x] Amendment / Reply
- [ ] After Final
- [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
- [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group (*Appeal Notice, Brief, Reply Brief*)
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) *(please identify below)*:

Remarks [ ]

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm *or* Individual name	BakerBotts LLP 30 Rockefeller Plaza New York, NY 10112
Signature	Rochelle K. Seide — Att Name: Rochelle K. Seide PTO Reg: 32,300
Date	Oct. 31, 2003

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450 on this date: Oct. 31, 2003

Typed or printed name	Rochelle K. Seide		
Signature	Rochelle K. Seide	Date	Oct. 31, 2003

BAKER BOTTS LLP

FEE TRANSMITTAL for FY 2003

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 0

Complete if Known	
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METHOD OF PAYMENT *(check all that apply)*

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☑ Deposit Account:

Deposit Account Number: 02-4377

Deposit Account Name: Baker Botts LLP

The Commissioner is authorized to: *(check all that apply)*

☐ Charge fee(s) indicated below ☑ Credit any overpayments

☑ Charge any additional fee required under 37CFR 1.16 and 1.17

☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

		Extra Claims		Fee from below		Fee Paid
Total Claims	- 20 =	0	X		=	0
Independent Claims	- 3 =	0	X		=	0
Multiple Dependent					=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 0

SUBMITTED BY

(Complete *(if applicable)*)

Name (Print/Type)	Rochelle K. Seide	Registration No. (Attorney/Agent)	32,300	Telephone	212-408-2500
Signature	Rochelle K. Seide			Date	Oct. 31, 2003

BAKER BOTTS LLP

Attorney Docket Number: A34943 090495.0243

Title: METHOD TO IDENTIFY SIGNAL SEQUENCES

Use Space Below for Additional Information:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Graff et al.			
Serial No.	:	10/002,631	Examiner	:	Lambertson, D
Filed	:	October 31, 2001	Group Art Unit:		1645
For	:	METHOD TO IDENTIFY SIGNAL SEQUENCES			

RESPONSE TO RESTRICTION REQUIREMENT

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Box 1450, Alexandria, VA 22313-1450.

October 31, 2003
Date of Deposit

Rochelle K. Seide
Attorney Name

32,300
Registration No.

Rochelle K. Seide
Signature

October 31, 2003
Date of Signature

Commissioner for Patents
Box 1450
Alexandria, VA 22313-1450

Sir:

This is paper is submitted in response to the Office Communication dated October 2, 2003 in the above-identified application in which the Examiner issued a restriction requirement. The Examiner has required the selection of one of three groups of claims for prosecution in this application:

Group I: claims 114-128 and 135-144, drawn to a method for identifying a candidate nucleic acid encoding a signal/transmembrane sequence;

Group II: claims 129, drawn to a method of identifying the function of a polypeptide having a signal/transmembrane sequence; and

Group III: claims 130-134, drawn to a method of correlating the function of a nucleic acid or polypeptide having a signal/transmembrane sequence to a disease state or other physiological condition.

The Examiner asserts that the inventions of Group I and II are unrelated. Specifically, the Examiner alleges that the outcome of the claims of Group I is the identification of a nucleic acid sequence that encodes an amino acid with the capacity to traverse biological membranes, and involves method steps where it is determined if such a sequence is encoded by the nucleic acid that is being tested. The Examiner alleges that the invention of Group II requires different method steps, wherein the function of a polypeptide having a signal sequence is determined. The Examiner further alleges that the function of each polypeptide has a different function and could be variegated. The Examiner alleges that these functions are clearly different from determining whether a polypeptide has the ability to traverse a biological membrane. Because these inventions allegedly have different functions and modes of operation, the Examiner asserts that they are patentably distinct.

The Examiner asserts that the inventions of Group I and III are unrelated. The Examiner further alleges that the invention of Group III also requires different method steps from the invention of Group I and has a different function of a polypeptide having a signal sequence correlated to a disease condition. The Examiner further alleges that the determination of whether a particular protein is associated with a disease state results in an outcome that is different from the identification of a transmembrane sequence. The Examiner alleges that the invention of Group III requires different method steps such as the determination of a disease

state, for example the showing that there is a corresponding mutation on a gene encoding a protein with a transmembrane sequence. Because these inventions allegedly have different functions and modes of operation, the Examiner asserts that the inventions are patentably distinct.

The Examiner also asserts that the inventions of Group II and III are unrelated. The Examiner alleges that the invention of Group II involves a determination of function for a polypeptide, requiring biochemical examination to associate the polypeptide with a particular activity. The Examiner alleges that the invention of Group III requires that one determine that a disease state is related to a mutation in a protein having a signal sequence. The Examiner alleges that the inventions utilize different method steps to arrive at different outcomes, e.g. the identification of a biochemical activity activity versus the correlation of disease state with a mutated transmembrane sequence containing protein. Because these inventions allegedly have different functions and modes of operation, the Examiner asserts that the inventions are patentably distinct.

Furthermore, the Examiner alleges that the inventions have separate status in the art due to their different classification. The Examiner further allege that in instances where the classification are the same, the non-patent literature searches are not co-extensive, causing the searches to be burdensome.

Applicant respectfully traverses. There are two criteria for a proper requirement for restriction between patentably distinct inventions: (A) The inventions must be independent (see MPEP § 802.01, § 806.04 and § 808.01) or distinct as claimed (see MPEP § 806.05 - § 806.05(i)); and (B) There must be a serious burden on the Examiner if restriction is required (see MPEP § 808.02, § 806.04(a) - § 806.04(i), § 808.01(a), and § 808.02). The term "independent"

(*i.e.*, not dependent) means that there *is no disclosed relationship* between the two or more subjects disclosed, that is, they are unconnected in design, operation, or effect. (Emphasis supplied, MPEP § 802.01). Moreover, MPEP § 803 states that "[i]f the search and examination of an entire application can be made without serious burden, the Examiner *must* examine it on the merits, even though it contains claims to distinct or independent inventions." (Emphasis supplied).

Applicant submits that the inventions of Group I, II and III are not independent. The inventions of Group II and III are clearly connected to the invention of Group I. The steps comprising the method recited in the claims of Group I lead to the identification of a eukaryotic nucleic acid encoding a secreted protein. Applicants submit that the identification of the "candidate eukaryotic nucleic acid that encodes a polypeptide," as recited in claims 114, encompasses, not only a mere identification of the sequence of the polypeptide, but also includes an analysis of the function of the polypeptide. The requirement that the polypeptide be a secreted protein is one criteria used for the identification of the nucleic acid and its corresponding polypeptide comprising a signal sequence. The use of the secretory property in the identification of the candidate polypeptide does not preclude one from an additional related step of analyzing the function of the polypeptide. Accordingly, the analysis of whether the identified candidate polypeptide can be correlated to a disease condition is also encompassed by goal of identifying a candidate eukaryotic nucleic acid that encodes a polypeptide having a signal/transmembrane sequence. All the inventions of Groups I, II and III share the common goal of identification of a candidate eukaryotic nucleic acid that encodes a polypeptide. Thus, applicant submits that the additional steps recited in inventions of Group II and III are clearly related to Group I and to each other.

In conclusion, Applicant asserts that the claims of Groups I-III are connected by a disclosed relationship and, therefore, should be examined together. Applicant further submits that the claims are connected by a single, searchable unifying relationship, and that the Examiner would not, therefore, be seriously burdened by searching and examining the claims of these groups in a single application. Accordingly, Applicant requests withdrawal of the restriction requirement.

However, should the Examiner remain unpersuaded by Applicant's arguments regarding the relationship of the claims, Applicant elects Group I, with traverse, consisting of Claims 114-128 and 135-144, drawn to a method for identifying a candidate nucleic acid encoding a signal/transmembrane sequence.

CONCLUSION

On the basis of the foregoing remarks, Applicant requests reconsideration and withdrawal of the rejection under 35 U.S.C. §121. Applicant respectfully submits that the claims on file are ready for examination and in condition for allowance.

Respectfully submitted,

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Attorney for Applicants

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